BOROZNIN, A.A.; BLOKH, E.L.; ROMANOV, G.I.; KHRENOV, G.S.; KUKUSHKIN, A.I., inzh., red.; TARAYEVA, Ye.K., red.izd-va; MOCHALINA, Z.S., tekhn. red.

[Economic effectiveness of the introduction of new techniques in heat insulating operations]Ekonomicheskaia effektivnost' vnedreniia novoi tekhniki v proizvodstvo teploizoliatsionnykh rabot; opyt tresta Stroitermoizoliatsiia. Moskva, Gosstroiizdat, 1962. 86 p. (MIRA 16:2)
(Insulation (Heat))--Technological innovations)

BLOKH, E.L., inzh.; POTOKER, I.M., inzh.; ROMANOV, G.I., inzh.; KHRENOV, G.S., inzh.; DANILOV, P.P., nauchnyy red.; [illegible], L.I., red.; TARKHOVA, K.Ye., tekhn. red.

[Safety instructions for insulation work and the manufacture of materials at production bases] Instruktivnye ukazaniia po tekhnike bezopasnosti pri proizvodstve teploizoliatsionnykh rabot i izgotovlenii materialov na proizvodstvennykh bazakh. Moskva, Gosstroiizdat, 1963. 102 p. (MIRA 16:9)

1. Russia (1917- R.S.F.S.R.) Ministerstvo montazhnykh i spetsial'nykh stroitel'nykh rabot. Tekhnicheskoye upravleniye. (Insulating materials) (Industrial safety)

Khrenov, I. A.

USSR/ Miscellaneous - Conferences

Card 1/1 Pub. 124 - 12/39

Authors : Khrenov, I. A., Cand. of Hist. Sc.

Title : International Scientific Life. The session of the Polish Acad. of Sc. devoted to the 50-th anniversary of the First Russian Revolution

Periodical : Vest. AN SSSR 26/2, 81-83, Feb 1956

Abstract : Minutes are presented from the special session held by the Academy of Sciences Warsaw, Poland, celebrating the 50-th anniversary of the First Russian Revolution of 1905-1907. Present at this session were delegates of scientific institutions from Bulgaria, Hungary, Rumania, Czechoslovakia, Albania, Yugoslavia and East Germany.

Institution : .....

Submitted : .....

L 31998-65 / EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/GS/RM
ACCESSION NR: AT5004101 S/0000/64/000/000/0130/0135

AUTHOR: Patrikeyev, G. A.; Antchak, V. K.; Levinshteyn, M. S.; Khrenov, I. F.; Myagkov, P. L.; Lebedev, I. M.; Kolodyazhnyy, L. I. 25 24

TITLE: The destruction of rubberized materials by abrasion B+1

SOURCE: Nauchno-tekhnicheskoye soveshchaniye po friktsionnomu iznosu rezin. Moscow, 1961. Friktsionnyy iznos rezin (Frictional wear of rubber); sbornik statey. Moscow, Izd-vo Khimiya, 1964, 130-135

TOPIC TAGS: synthetic rubber, rubber wear, 15 frictional wear, rubber abrasion, rubberized fabric

ABSTRACT: The effect of pressure, deformation, 15 contact area and speed on the abrasion of rubberized materials was studied. Single- or double-sided rubberized cotton fabrics were subjected to abrasion on a newly developed tester (see p. 238 in this same collection). A linear relationship was shown to exist between pressure (0.3-5 kg/cm^2) and N, the number of friction cycles required for the destruction of material; but a number of critical ratios of pressure, contact area (and the related radius of the sample holder) and deformation were established at which a rapid change in the fabric properties occurs and

Card 1/2

L 31998-65

ACCESSION NR: AT5004101

complete destruction of the material is rapidly attained. The study of the N-pressure relationship at constant contact area or constant deformation therefore requires preliminary measurements under variable conditions to establish possibly existing critical conditions. The study of abraded materials indicated the existence of various abrasion mechanisms, including pure abrasion, tearing-out and breaking-out of parts, and the adhesive failure of the rubber layer. Good adhesion of the latter to the textile base is particularly required at high (3-5 kg/cm^2) pressures.
Orig. art. has: 6 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 05Aug 64 ENCL: 00 SUB CODE: MT

NR REF SOV: 000 OTHER: 000

Card 2/2

L 40561-65 EWT(d)/EWT(m)/EPF(c)/EWP(c)/EWP(v)/EWP(j)/T/EWP(k)/EWP(l)
Pc-4/Pf-4/Pr-4 GS/RM
ACCESSION NR: AT5004108 S/0000/64/000/000/0238/0241

AUTHOR: Patrikeyev, G. A.; Antchak, V. K.; Levinshteyn, M. S.; Khrenov, I. F.

TITLE: New method and apparatus for determining the abrasive wear resistance of rubberized fabrics

SOURCE: Nauchno-tekhnicheskoye soveshchaniye po friktsionnomu iznosu rezin. Moscow, 1961. Friktsionnyy iznos rezin (Frictional wear of rubber); sbornik statey. Moscow, Izd-vo Khimiya, 1964, 238-241

TOPIC TAGS: rubber wear, frictional wear, rubber abrasion, abrasion tester, rubberized fabric

ABSTRACT: An apparatus has been developed for testing the abrasive wear of rubberized fabrics at a selected sample curvature under stress and at selected loads. Exchangeable sample holders of 3-32 mm radius determine the desired curvature. The movable carriage (6 in Fig. 1 of the Enclosure) is covered with an exchangeable abrasive material and driven at speeds corresponding to 8-130 cycles/min and a maximum velocity of 0.2m/sec. Pressures of 0.1-5 kg/cm^2 are applied and the contact area changes from 0.2 to 1 cm^2. The wear resistance of the example is defined as

Card 1/2

L 40561-65
ACCESSION NR: AT5004108

3

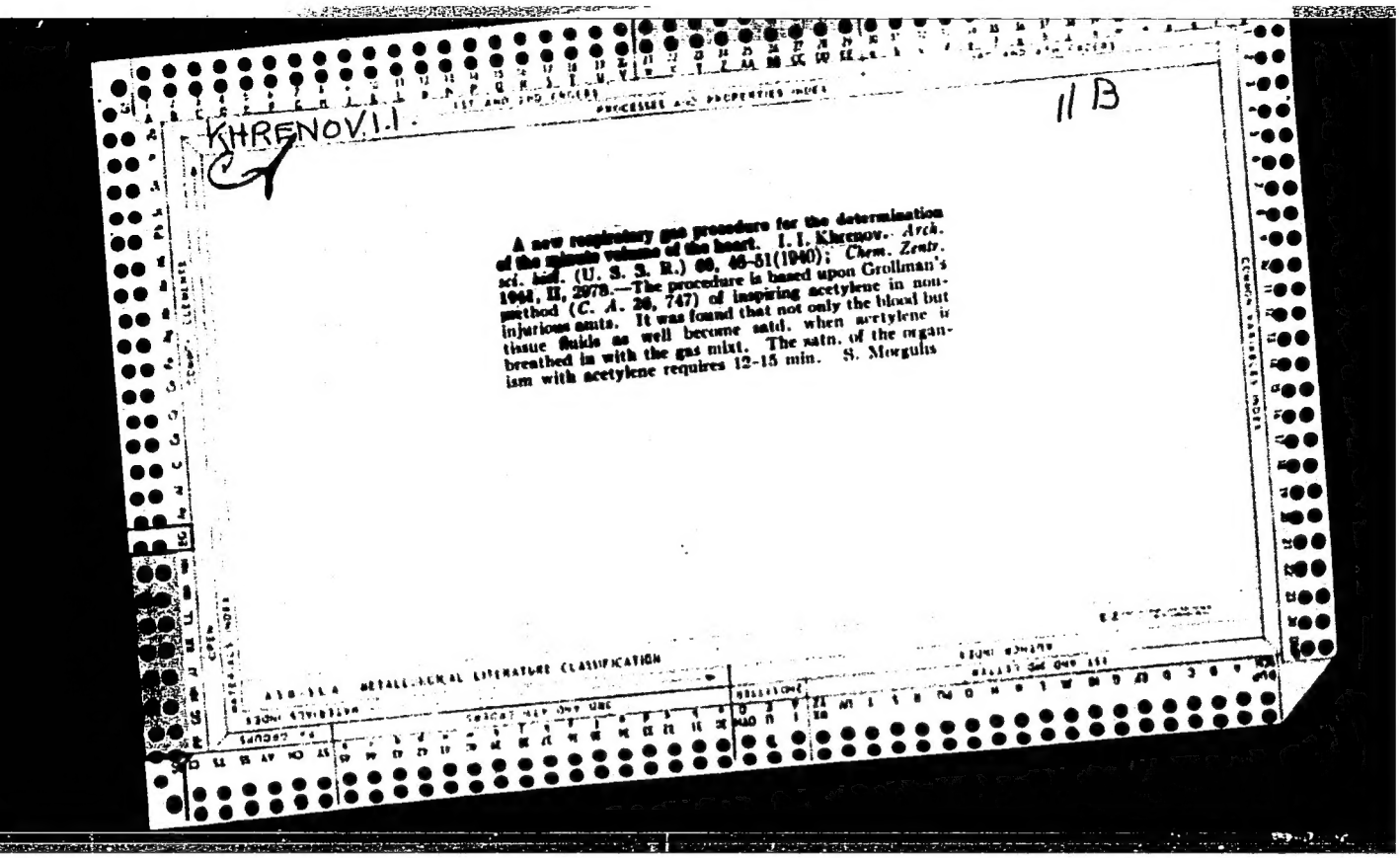
the number of cycles or as the length of the friction path required for the total destruction of the rubber layer, which is determined visually. "The authors acknowledge the assistance of P. L. Myagkov, I. M. Lebedev and L.I. Kolodyazhnyy in developing the apparatus and testing methods." Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 05Aug64 ENCL: 02 SUB CODE: MT, IE

NO REF SOV: 003 OTHER: 001

Card 2/4



KHRENOV, I. I.

11 B

A new respiratory gas procedure for the determination of the minute volume of the heart. I. I. Khrenov. *Arch. sci. biol.* (U. S. S. R.) **60**, 46–51(1940); *Chem. Zentr.* 1941, II, 2978.—The procedure is based upon Grollman's method (*C. A.* **26**, 747) of inspiring acetylene in non-injurious amts. It was found that not only the blood but tissue fluids as well become satd. when acetylene is breathed in with the gas mixt. The satn. of the organism with acetylene requires 12–15 min. S. Mogulis

KHRENOV, I. I. Oct 48

USSR/Medicine - Dogs
Medicine - Blood Circulation

"Effects of the Dynamics of Blood Circulation on the Growth of Dogs," G. S. Kislitsyna, I. I. Khrenov, 4 pp

"Dok Ak Nauk SSSR", Vol LXII, No 4

Presents results of observations on six dogs (one male and five female) for first 20 months of their lives. Tables give variations in respiratory exchange and blood circulation according to growth, relationship between blood circulation, respiratory exchange, and weight, and the influence of age on intensity of blood circulation, respiratory exchange, and comparative capacity of the heart. Submitted by Acad L. A. Orbeli, 17 Jul 48.

PA 33/49T66

Q

COUNTRY : USSR
CATEGORY : Farm Animals. Cattle.
ABS. JOUR. : RZhBiol., No. 6, 1959, No. 25790

AUTHOR : Khrenov, I. I.
INST. : AS USSR.
TITLE : The Characteristics of Metabolism and Some Vegetative Reactions in Cows of Various Nervous System Types.

ORIG. PUB. : V sb.: Vopr. fiziol. s.-kh. zhivotnykh. M.-L., AN SSSR, 1957, 99-110

ABSTRACT : For the experiments 7 cows which were divided into three nervous system types on the basis of the free and stall-restricted motor-alimentary method, were used: the weak nervous system type, strong unbalanced type, and strong well balanced type. The intensity levels of the gas-energy metabolism (with the aid of the group method), blood circulation and pulmonary respiration were determined for these cows. The animals were studied throughout their en-

CARD: 1/3

14

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No.

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : tire production cycle. When a partial dietary deficiency existed (during the time of the cows' stall period), a marked inhibition in the intensity of the thermal metabolism and other functions was observed; when the diet was ample, gas metabolism, blood circulation and pulmonary respiration increased sharply. The cows of the strong motor and well balanced nervous activity type proved most adaptable to conditions of insufficient and ample nutrition. Also, they provided better returns of feed

Card: 2/3

KHRENOV, I. I.

Q-2

USSR/Farm Animals - Cattle

Abs Jour : Ref Zhur - Biol., No 1, 1959, 2664

Author : Khrenov, I.I.

Inst : AN USSR

Title : Response of Cows to Level of Feeding.

Orig Pub : V sb.: Vopr. fiziol. s.-kh. zhivotnykh, M.-L., AN SSSR, 1957, 157-167.

Abstract : Five cows of the East Friesian breed (live weight 500-750 kg; milk yield 4,500 to 6,500 kg) were used to determine, by means of complex massage technique, a number of indexes of gaseous and energy metabolism, blood circulation and pulmonary respiration at differing levels of feeding. A low level of the gaseous and energy metabolism corresponded to the lowest feeding level. The metabolism

Card 1/2

- 23 -

USSR/Human and Animal Physiology. The Nervous System T-12

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65755

Author : Khrenov I.I.
Inst :
Title : The Food Reflex in Cows

Orig Pub : Fiziol. zh. SSSR, 1957, 43, No 9, 894-900

Abstract : By means of a complex method, it was established that ten minutes after a single ingestion of food by cows, there was an increase in CO_2 elimination, pulse frequency and minute and systolic cardiac volume. Respiration was more rapid and deeper. The onset of eating was accompanied by a rapid rise in the respiratory coefficient above unity. At the termination of eating the respiratory coefficient began to fall slowly. The changes in respiratory coefficient are considered as a conditioned-reflex phenomenon.--T.G. Veteleva

Card : 1/1

1. Laboratoriya fiziologii sel'skokhozyaystvennykh zhivotnykh i Laboratoriya eksperimental'noy genetiki vusshey nervnoy deyatel'nosti Institute fiziologii im. I.P.Pavlova AN SSSR, Leningrad.

KHRENOV, I.I.

Gases of the paunch. Nauch. soob. Inst. fiziol. AN SSSR no.1:194-195 '59. (MIRA 14:10)

1. Laboratoriya fiziologii sel'skokhozyaystvennykh zhivotnykh (zav. - I.A.Baryshnikov) Institut fiziologii imeni Pavlova AN SSSR.
(RUMEN) (RESPIRATION)

SKVORTSOVA, A.A.; KHRENOV, I.I.

Some features of basic metabolism and the specific dynamic effect of feed in cattle. Trudy Inst.fiziol. 8:404-410 '59.
(MIRA 13:5)

1. Laboratoriya fiziologii sel'skokhozyaystvennykh zhivotnykh (zaveduyushchiy I.A. Baryshnikov) i Nauchno-opytnaya stantsiya (direktor I.F. Shulzhenko) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(METABOLISM) (CONDITIONED RESPONSE)

KHRENOV, I.I. (Leningrad)

"Methods of studying gas exchange in man and animals" by R.P. Ol'nianskaia, L.A. Isaakian. Reviewed by I.I.Khrenov. Fiziol. zhur. 46 no.12:1515-1516 D '60. (MIRA 14:1)
(RESPIRATION) (OL'NIANSKAIA, R.P.)
(ISAAKIAN, L.A.)

SKVORTSOVA, Alevtina Alekseyevna; KHRENOV, Ivan Ivanovich; BARYSHNIKOV, I.A., prof., otv. red.; NATAROVA, N.V., red. izd-va; AREF'YEVA, G.P., tekhn. red.

[Technique for studying blood circulation, gas and energy metabolism, and pulmonary respiration in farm animals; a practical guide] Tekhnika issledovaniia krovoobrashcheniia, gazoenergeticheskogo obmena i legochnogo dykhaniia u sel'skokhoziaistvennykh zhivotnykh; prakticheskoe rukovodstvo. Moskva, Izd-vo Akad.nauk SSSR, 1961. 82 p. (MIRA 15:1)
(VETERINARY PHYSIOLOGY) (BLOOD—CIRCULATION) (RESPIRATION)

KHRENOV, I.I.

Effect of chronic stimulation of the afferent nerves of mammary glands on gas exchange in lactating goats. Fiziol. zhur. 50 no.3: 314-318 Mr '64. (MIRA 18:1)

1 Laboratoriya fiziologii i biokhimii laktatsii instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.

ACC NR: AP6018003 SOURCE CODE: UR/0413/66/000/010/0115/0116

INVENTOR: Lytov, A. N.; Marinich, I. L.; Khrenov, I. I.

ORG: None

TITLE: A pressure reducer. Class 47, No. 181933

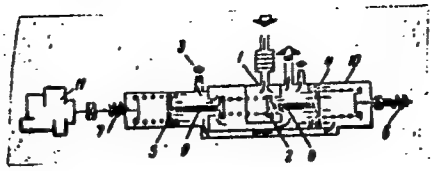
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 115-116

TOPIC TAGS: pressure regulator, valve, pneumatic device

ABSTRACT: This Author's Certificate introduces a pressure reducer consisting of a housing, valves and sensing elements. Low torque is achieved on the screw which regulates the output pressure of the reducer by locating the reduction stages in a single housing. These stages are made in the form of valves connected by rods to sensing elements with different areas. The reduced output pressure is released from the first stage which has the larger sensing element area. Pressure reduced by the first stage is fed through a system of holes into the second stage which has the smaller sensing element. The pressure being reduced by the second stage is fed into an airtight cavity in the first stage sensing element and the output pressure is controlled by rotating the second stage regulating screw.

Card 1/2 UDC: 621.646.4;62.83

ACC NR: AP6018003



1—housing; 2 and 3—valves; 4 and 5—sensing elements; 6 and 7—regulating screws; 8 and 9—rods; 10—airtight cavity; 11—drive unit

SUB CODE: 13/ SUBM DATE: 11Dec64

ACC NR: AP6018002 SOURCE CODE: UR/0413/66/000/010/0115/0115

INVENTOR: Lytov, A. N.; Khrenov, I. I.; Marinich, I. L.

ORG: None

TITLE: A pressure reducer. Class 47, No. 181932

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 115

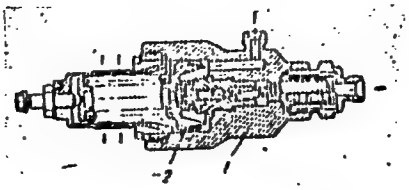
TOPIC TAGS: pressure regulator, valve, pneumatic device

ABSTRACT: This Author's Certificate introduces a pressure reducer consisting of a housing with reducing and safety valves, control spring and sensing element. The sensing element is made in the form of a piston. Provision is made for eliminating sensing element jamming during misalignment of its axis relative to that of the housing, improving sensitivity to pressure variation, and increasing the service life of the pressure reducer. The sensing element is made in the form of a piston with a spherical guide surface whose diameter is equal to that of the sensing element.

UDC: 621.646.45

Card 1/2

ACC NR: AP6018002



1--housing; 2--sensing element

SUB CODE: 13/ SUBM DATE: 31Mar64

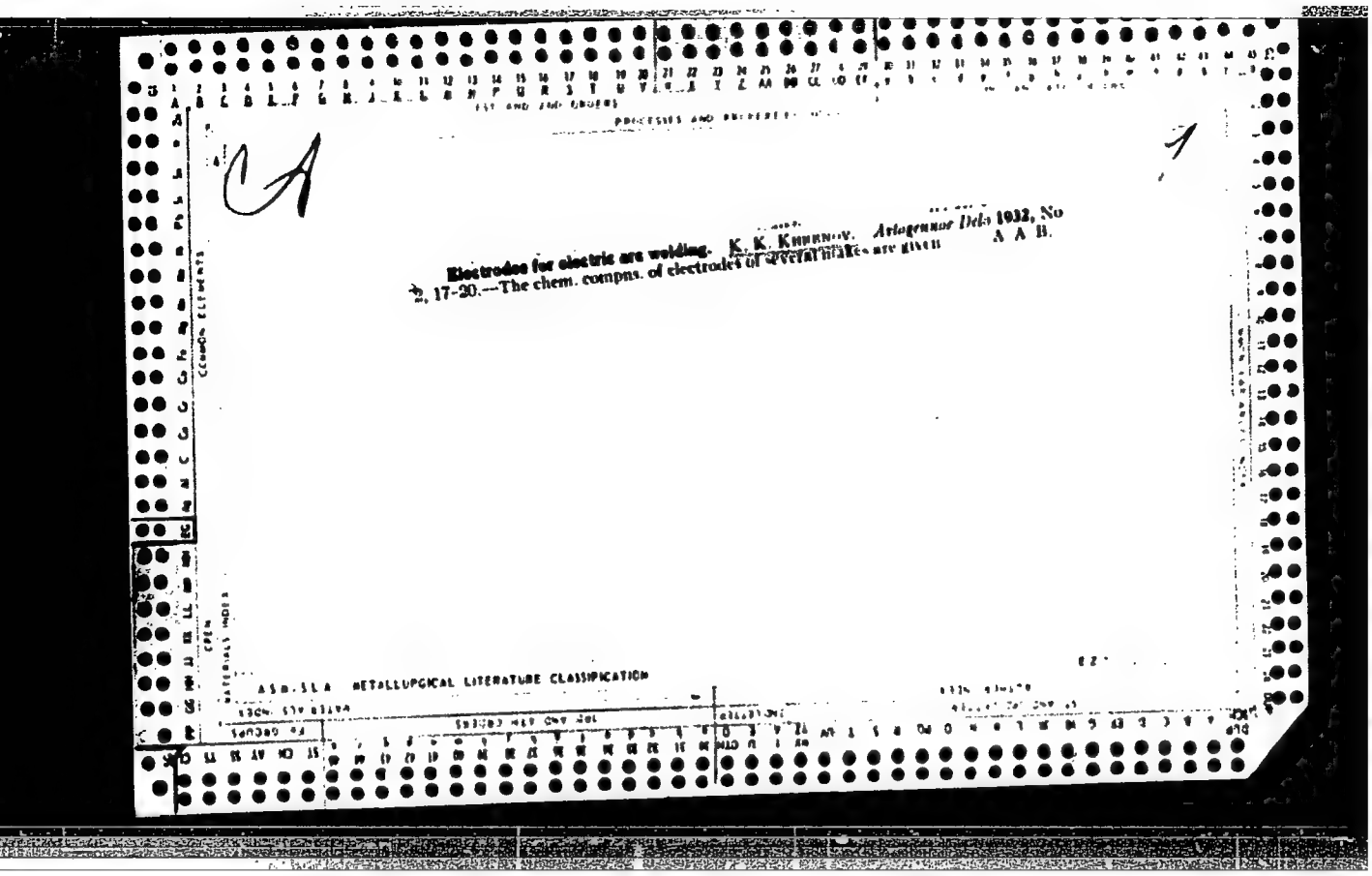
Card 2/2

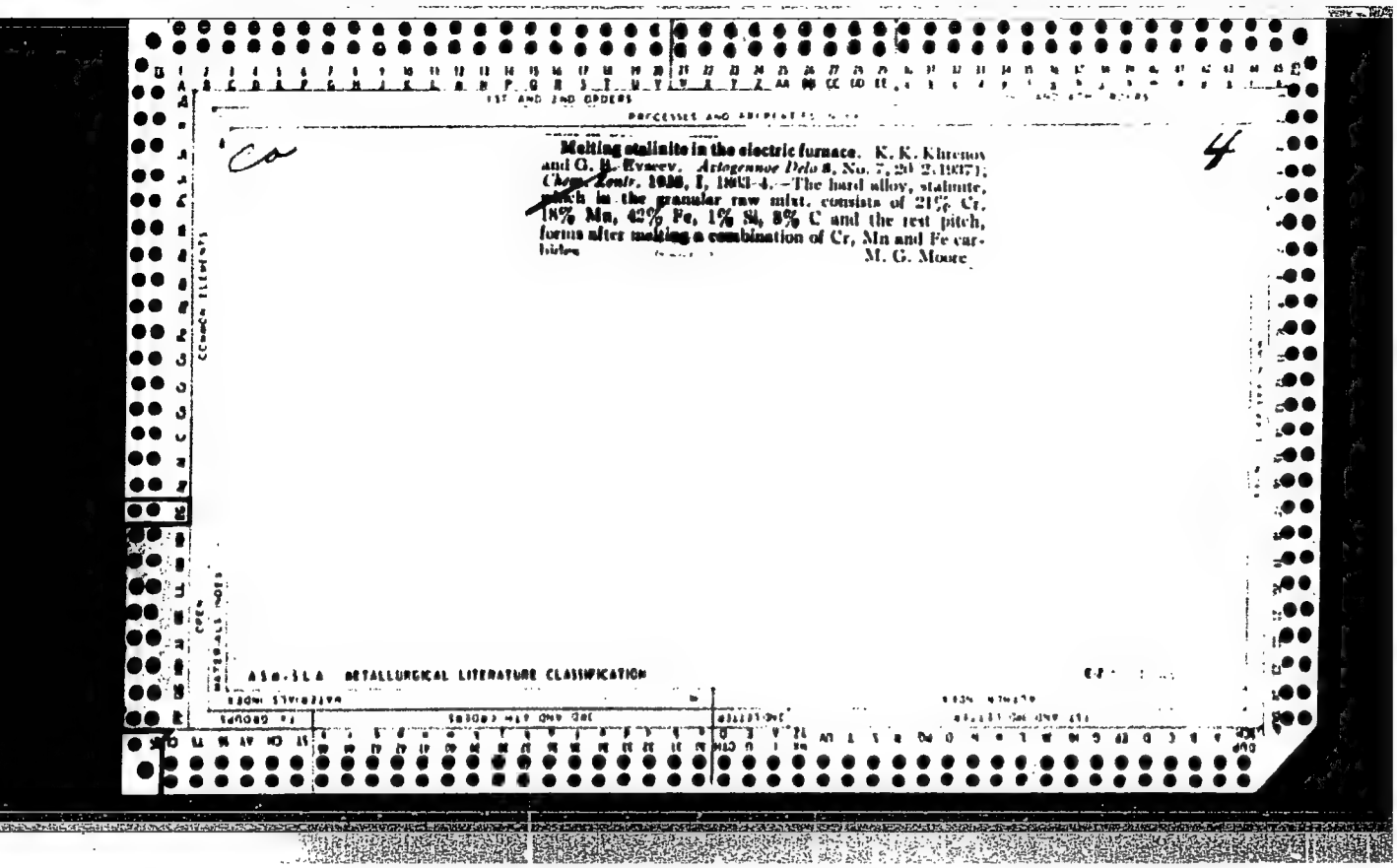
KHRENOV, I. M.

Synthesis and properties of cyclohexylhexylmethanol and 3-cyclohexyl-2-methylnonane. A. D. Petrov, K. M. Krutov, and I. M. Khrenov (Gorkov State Univ.). *J. Gen. Chem.* (U.S.S.R.) 15, 799-801(1945).—PrCHO and $C_6H_{11}MgBr$ (I) gave 72% cyclohexylpropylmethanol (II), b_{10} 98–103°. Oxidation of II with $Na_2Cr_2O_7$ and H_2SO_4 gave *Pr cyclohexyl ketone*, b_{10} 93–4°, d_4^{19} 0.900, n_D^{19} 1.459, which with EtMgBr gave a mixt. of an alc. and an olefin which by distn. over I_2 gave an olefin (III), b_{10} 85–9°, d^{19} 0.800, n_D^{19} 1.460. Hydrogenation of III over Pt converted this to *3-cyclohexylhexane*, b_{10} 87–9°, d^{19} 0.838, n_D^{19} 1.457, MR_D calcd. 55.16, found, 54.58, sets −70°, cetene no. 41. I and $C_6H_{11}CHO$ yielded 55% *cyclohexylhexylmethanol*, b_{10} 136–7°, which oxidized to 47% *hexyl cyclohexyl ketone* (IV), b_{10} 130–2°, d 0.8816, n 1.4520. With iso-PrMgBr IV gave a mixt. of alc. and olefin which dehydrated when vacuum-distd. over I_2 to give 31.7% of an olefin (V) b_{10} 107–11°, d_4^{19} 0.8792, n_D^{19} 1.4693. Oxidation of V gave Me_2CO and IV, so that dehydration occurs mostly in the iso-Pr radical. Hydrogenation of V gave *3-cyclohexyl-2-methylnonane*, b_{10} 115–20°, d_4^{19} 0.8590, n_D^{19} 1.4600, sets −50°, cetene no. 64. Thus, replacing Ph by cyclohexyl in such compds. lowers the setting temp. and increases the antidetonating power. H. M. Leicester

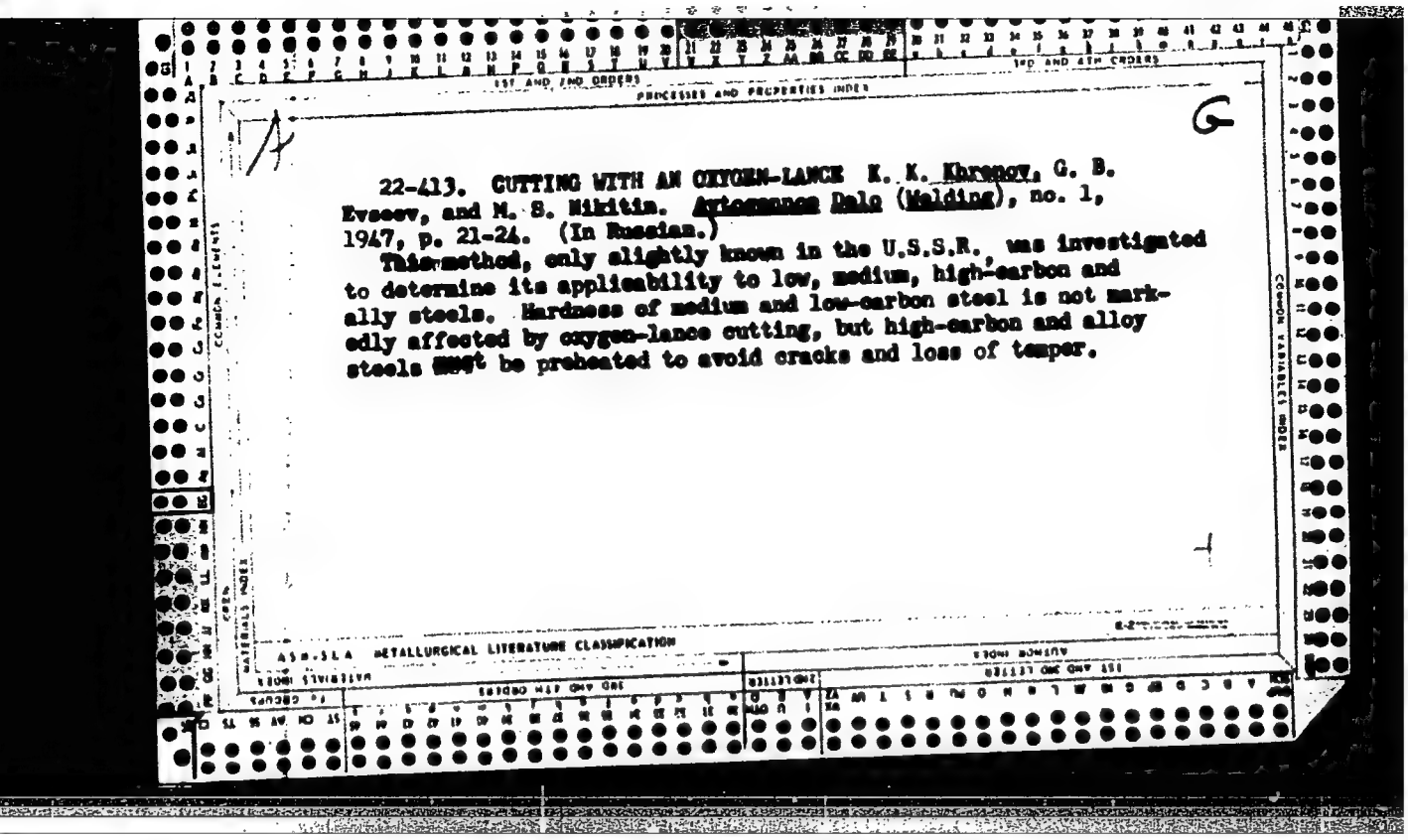
BYSTROV, Il'ya Nikolayevich; KHRENOV, Ivan Yegorovich; SAYANOV, Vissarion, red.; ROZANOV, M.D., red.; LEVONEVSKAYA, L.G., tekhn.red.

[Labor's finest; work and life of a group in the Kirov (formerly Putilov) Factory] Gvardiia truda; trudy i dni kollektiva Kirovskogo (byvshego Putilovskogo) zavoda. Lenizdat, 1959. 131 p. (MIRA 12:6)
(Leningrad--Labor and laboring classes)





Melting stalinite in the electric furnace. K. K. Khrenov and G. B. Evseev. *Avtogennoe Delo* **8**, No. 7, 20–2 (1937); *Chem. Zentr.* 1938, I, 1953–4.—The hard alloy, stalinite, which in the granular raw mixt. consists of 21% Cr, 18% Mn, 42% Fe, 1% Si, 8% C and the rest pitch, forms after melting a combination of Cr, Mn and Fe carbides.
M. G. Moore



22-413. CUTTING WITH AN OXYGEN-LANCE K. K. Khrenov, G. B. Evseev, and M. S. Nikitin. Avtogennoe Delo (Welding), no. 1, 1947, p. 21-24. (In Russian.)

This method, only slightly known in the U.S.S.R., was investigated to determine its applicability to low, medium, high-carbon and ally steels. Hardness of medium and low-carbon steel is not markedly affected by oxygen-lance cutting, but high-carbon and alloy steels must be preheated to avoid cracks and loss of temper.

KHRENOV, K.K.

Nikolai Gavrilovich Slavianov, 1854-1897. Vest.mash.27 no.12: 1-9 D '47. (MLRA 9:4)

1.Deystvitel'nyy chlen AN USSR.
(Slavianov, Nikolai Gavrilovich, 1854-1897)

KHRENOV, K. K.

PA 4/49T51

USSR/Engineering Jan 48
Welding, Electric
Cutting, Underwater

"Underwater Electric Welding and Cutting," K. K. Khrenov, Active Mem, Acad Sci, Ukrainian SSR, 10 pp

"Elektrichestvo" No 1

Discusses results of tests and research in Soviet Union to determine best methods for underwater welding and cutting. Shows how this technology has led to new method of repairing vessels--repairing of parts below the water line without putting the vessel in dry dock; development of this new field of technology, and its present state.

4/49T51

KHRENOV, K.K.

Particular case of an electric arc discharge. Dop.AN URSR no.3: 58-59 '48. (MLRA 9:9)

1.Diysniy chlen AN URSR. 2.Institut elektrozvaryuvannya imeni E.O.Patona Akademii nauk Ukrains'koi RSR.
(Electrometallurgy)

KHRENOV, K. K.

PA 19/49T36

USSR/Engineering Jun 48
Welding, Autogenous
Welding, Arc

"Automatic Regulation in Welding," K. K. Khrenov, Active Mem, Acad Sci Ukrainian SSR, 9½ pp

"Avtogennoye Delo" No 6

Theoretical discussion: (1) basic positions and definitions, (2) stability of regulation systems, investigation of automatic arc machines, and (3) automatic arc welding (published in "Avtogennoye Delo" No 7, 1948).

19/49T36

KHRENOV, K. K.

Author: Khrenov, K. K.

Title: New method employed in the welding technique.(Novosti svarochnoi tekhniki). (85 pages.

City: Kiev.

Publisher: Printing House of the Academy of Sciences of the Ukrainian S.S.R.

Date: 1949

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 3, No. 2, Page 98

KHRENOV, K. K.

Elektricheskaia svarochnaia duga. Kiev, Mashgiz, 1949. 203 p. illus., ports. Bibliography: p. (202)

Electric welding arc.

DLC: TK4660.K42

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

KHRENOV, K. K.

Khrenov, K. K. Automatic electric arc welding Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1949.

273 p. (50-55908) TK4660.K4

KHRENOV, K. K. and S. T. NAZAROFF

Avtomaticheskaia dugovaia elektrosvarka. Moskva, 1949. 273 p. illus.
Bibliography: p. (271)

Automatic electric arc welding.

DLC: TK4660.K4

SO: Manufacturing and mechanical engineering in the Soviet Union, Library of Congress, 1953.

KHRENOV, K.K.

Face gas welding. Dop. AN URSR no.2:53-55 '49. (MLRA 9:9)

1. Diysniy chlen AN URSR. 2. Institut budivel'noi mekhaniki AN URSR.

(Gas welding and cutting)

KHRENOV, K. K.

25766

Temperatura svarochnoy dvgi. Avtogen, delo 1949, No. 8, s. 14-15. Shadrin, A.B. Avtomaticheskie ustanovki dlya sverki kotlov parovozol serii. L. Sm. 25929.

8. Mashinovedenie. Mashinustroenie. Priborostrdenie (Spetsial'noe mashindstroenie - sm. po sootvestvuyush im cpets. Rasde

A. Obshchie boprosy

SO: Letopis' No. 34

KITSAK, N.A., inzhener; KHRENOV, K.K., redaktor; BABABASH, M., redaktor; LINBERG, T., tekhnicheskiy redaktor.

[Underwater metal cutting by welding and clearing of river beds] Reska metallov pod vodoi i raschistka rusel. Pod red. K.K.Khrenova. Kiev, Gos. izd-vo tekhn. lit-ry Ukrainy, 1950. 50 p. (MLRA 8:2)

1. Deystvitel'nyy chlen AN USSR (for Khrenov).
(Underwater welding and cutting) (Diving, Submarine)

KHRENOV, K. K.

[redacted]

160721

May 50

ER/Engineering - Welding
Fluxes, Double

utomatic Arc Welding Under Double Flux," K. K. Khre-
v, D. M. Kushnerev, 3½ pp

Avtogen Delo" No 5

evelops new method for arc welding using flux consist-
ng of two parts: active layer melted in welding proc-
ss and passive layer which remains in solid state and
creates static pressure on bath of liquid metal.
Method gives possibility of alloying metal in welded
seam at expense of flux without application of expensive
special electrode rods and permits welding of
steel with rusted surface. Describes fluxes
which are practically unaffected by rust of
base metal.

KHRENOV, K. K.

PA 167T59

USSR/Metals - Cutting Jul 50

"Oxygen Cutting of Steel of Great Thickness," K. K. Khrenov, Active Mem, Acad Sci Ukrainian SSR, M. M. Bort, Engr, Kiev Ord of Lenin Polytech Inst

"Avtogen Delo," No 7, pp 5-9

Describes cutting blowpipe R-100 for cutting 500-2,000 mm thicknesses. Gives design and operational data. Cutter has five changeable sets of cutting nozzles, preheaters, and injectors for cutting various thicknesses of steel. Authors developed automatic mount which permits

167T59

USSR/Metals - Cutting (Contd) Jul 50

cutting in longitudinal direction up to 6 m, crosswise up to 2 m, and along circumference of any radius up to 1 m. Equipment constructed in welding lab of Kiev Polytech Inst at request of a machine-building plant.

167T59

KHRENOV, K. K.

USSR/Metals - Heat Treatment Oct 50

"Arc Surface Hardening," K. K. Khrenov, Active Mem, Acad Sci Ukrainian SSR, G. V. Vasil'yev, Engr, Kiev Ord of Lenin Polytech Inst

"Avtogen Delo" No 10, pp 1-5

PA 167T82

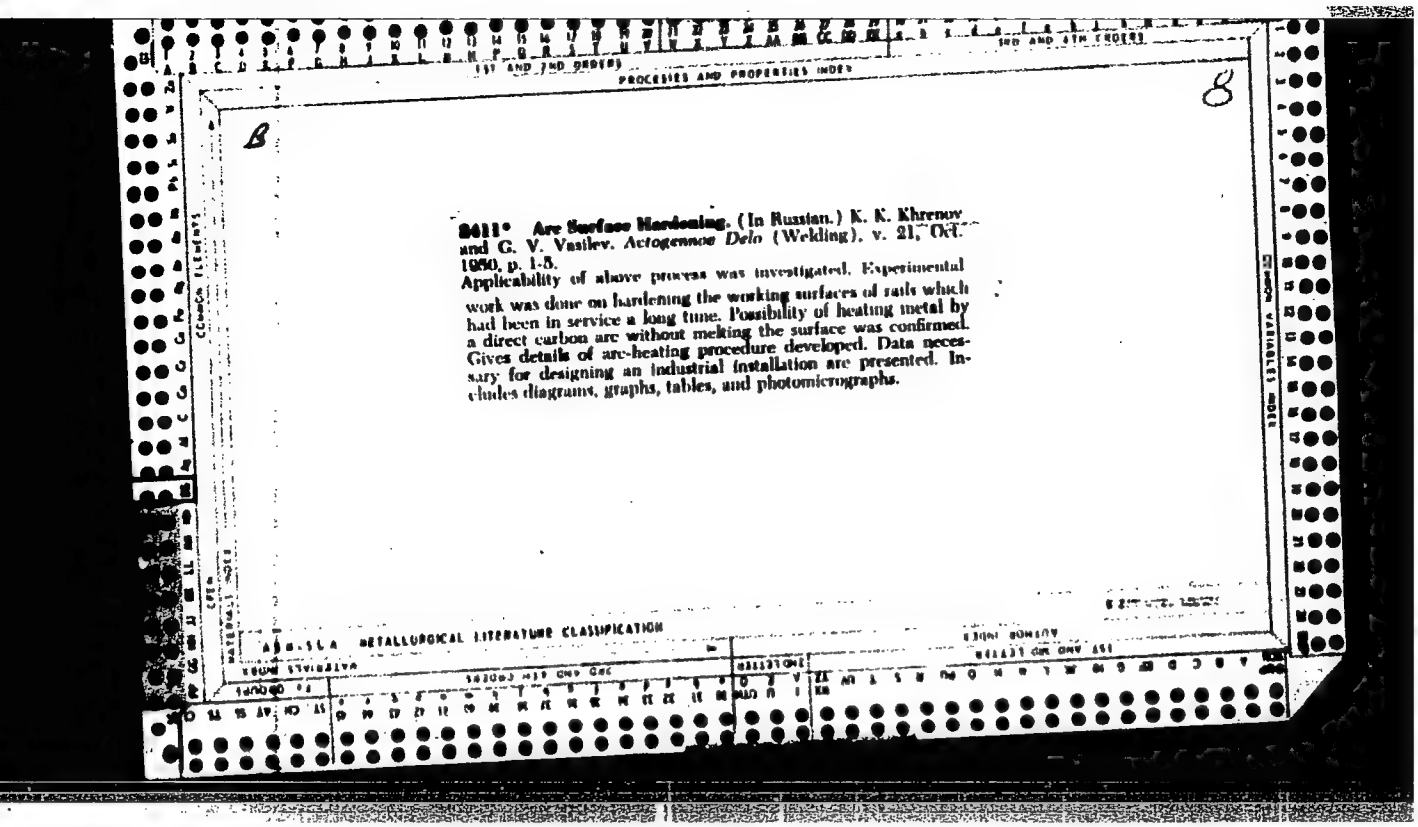
Experiments to heat a metal with a direct action DC carbon arc in process of surface hardening of rail ends. Possibility of melting a metal was eliminated by moving arc along surface to be heated with aid of transversal alternating magnetic field. Method is efficient, convenient in regulation, and less expensive than hf currents or oxyactylene flame.

167T82

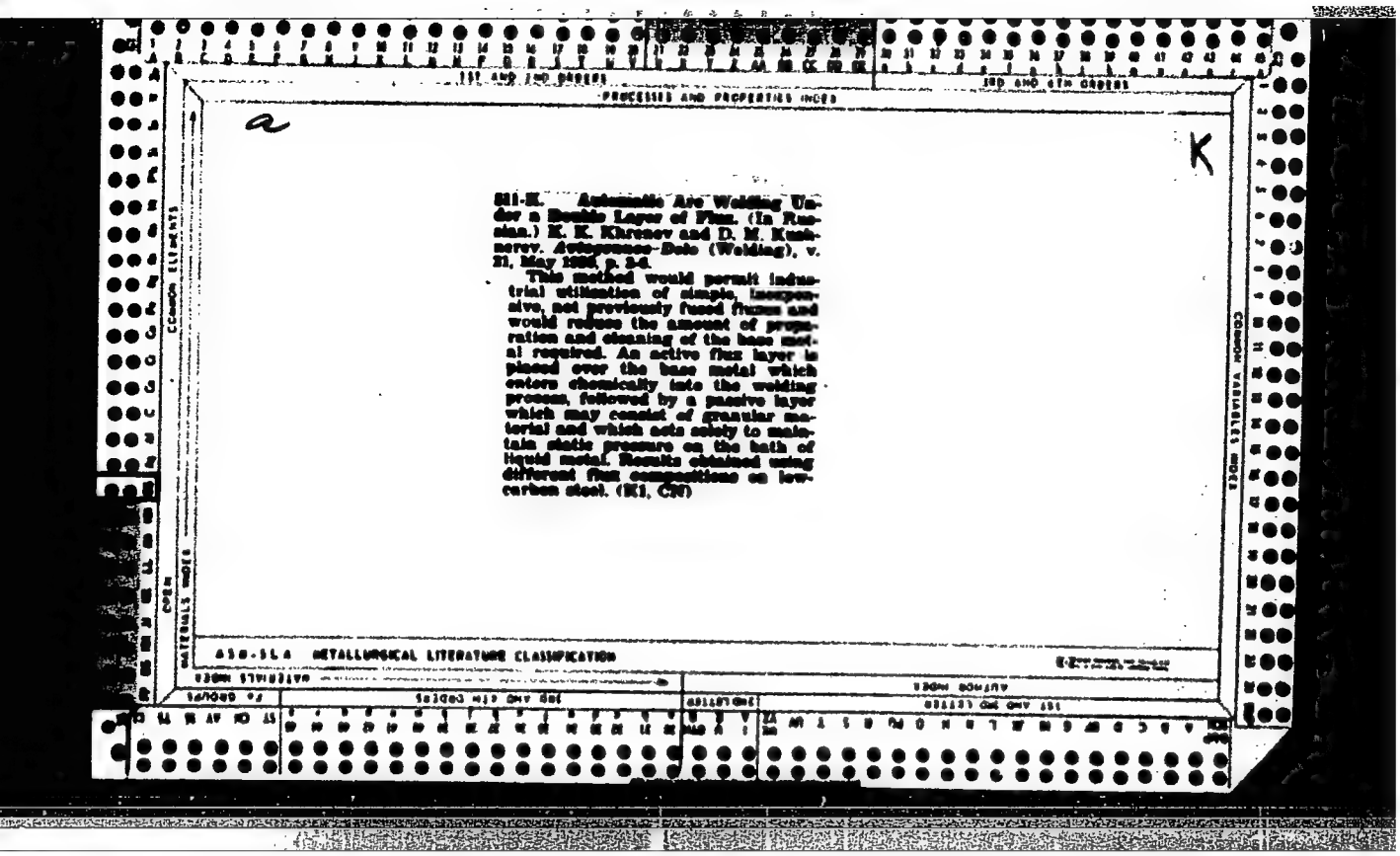
USSR/Metals - Heat Treatment (Contd) Oct 50

Describes laboratory installation and arc heating technique.

167T82



8411* **Arc Surface Hardening.** (In Russian.) K. K. Khrenov and G. V. Vasilev. *Avtogennoe Delo* (Welding), v. 21, Oct. 1950, p. 1-5.
Applicability of above process was investigated. Experimental work was done on hardening the working surfaces of rails which had been in service a long time. Possibility of heating metal by a direct carbon arc without melting the surface was confirmed. Gives details of arc-heating procedure developed. Data necessary for designing an industrial installation are presented. Includes diagrams, graphs, tables, and photomicrographs.



PROCESSES AND PROPERTIES INDEX

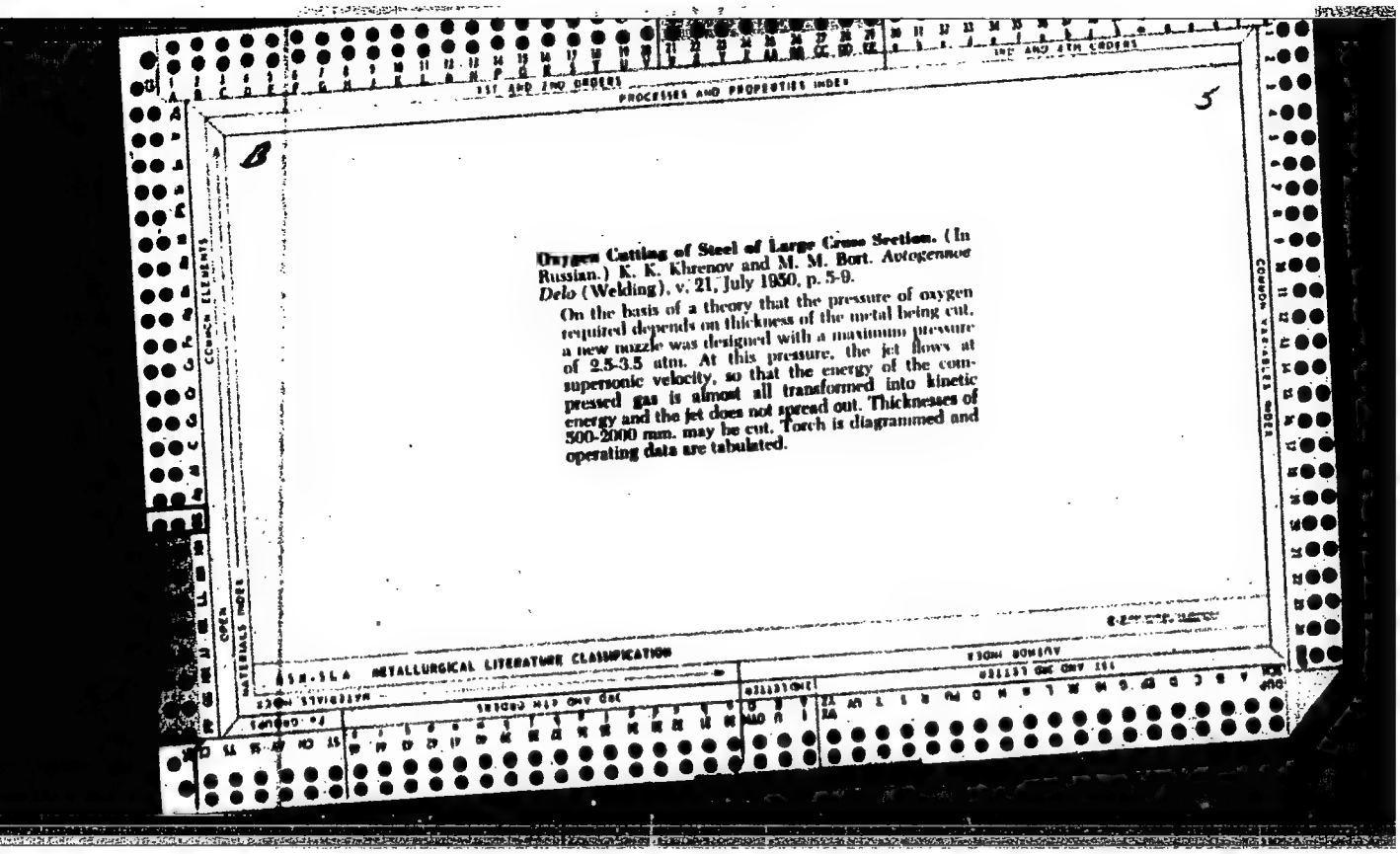
a

K

811-K. Automatic Arc Welding Under a Double Layer of Flux. (In Russian.) K. K. Khrenov and D. M. Kushnerev. *Avtogennoe Delo* (Welding), v. 21, May 1950, p. 2-6.

This method would permit industrial utilization of simple, inexpensive, not previously fused fluxes and would reduce the amount of preparation and cleaning of the base metal required. An active flux layer is placed over the base metal which enters chemically into the welding process, followed by a passive layer which may consist of granular material and which acts solely to maintain static pressure on the bath of liquid metal. Results obtained using different flux compositions on low-carbon steel. (E1, C9)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Oxygen Cutting of Steel of Large Cross Section. (In Russian.) K. K. Khrenov and M. M. Bort. *Avtogennoe Delo* (Welding), v. 21, July 1950, p. 5-9.

On the basis of a theory that the pressure of oxygen required depends on thickness of the metal being cut, a new nozzle was designed with a maximum pressure of 2.5-3.5 atm. At this pressure, the jet flows at supersonic velocity, so that the energy of the compressed gas is almost all transformed into kinetic energy and the jet does not spread out. Thicknesses of 500-2000 mm. may be cut. Torch is diagrammed and operating data are tabulated.

KHRENOV, K.K.

USSR/Engineering - Welding, Fluxes Jun 51

"Ceramic Unfused Fluxes for Automatic Welding," K. K. Khrenov, Mem, Acad Sci Ukrainian SSR, D. M. Kushnerev, Engr

"Avtogen Delo" No 6, pp 1-4

Suggests granulated fluxes which may include powders of metals and ferroalloys for alloying metal of weld. Each grain of flux contains all components in proper ratio. Flux components after mixing in dry state are converted into a paste with water glass. Granulated product is obtained either by

200T32

USSR/Engineering - Welding, Fluxes Jun 51 (Contd)

briquetting, drying and crushing or by direct drying of paste. Ceramic fluxes may be used successfully for welding steels of low quality, those with surface rust and high-alloy steels.

200T32

USSR/Engineering - Welding, Magnesium Aug 51

"Electric-Arc Welding of Magnesium Alloys," K. K. Khrenov, Mem, Acad Sci Ukrainian SSR, Docent M.N. Gapchenko, Cand Tech Sci, G. P. Sakhatskiy, Engr

"Avtogen Delo" No 8, pp 1-5

Investigated welding methods for Mg alloys of MAI type, containing 1.3-2.5% Mn and small amounts of Al, Zn, Fe, Si and others. Out of 10 flux systems investigated best results were obtained from fluxes contg considerable amt of fluorides of alkali metals. Mech properties of welded joints are lower than those of base metal.

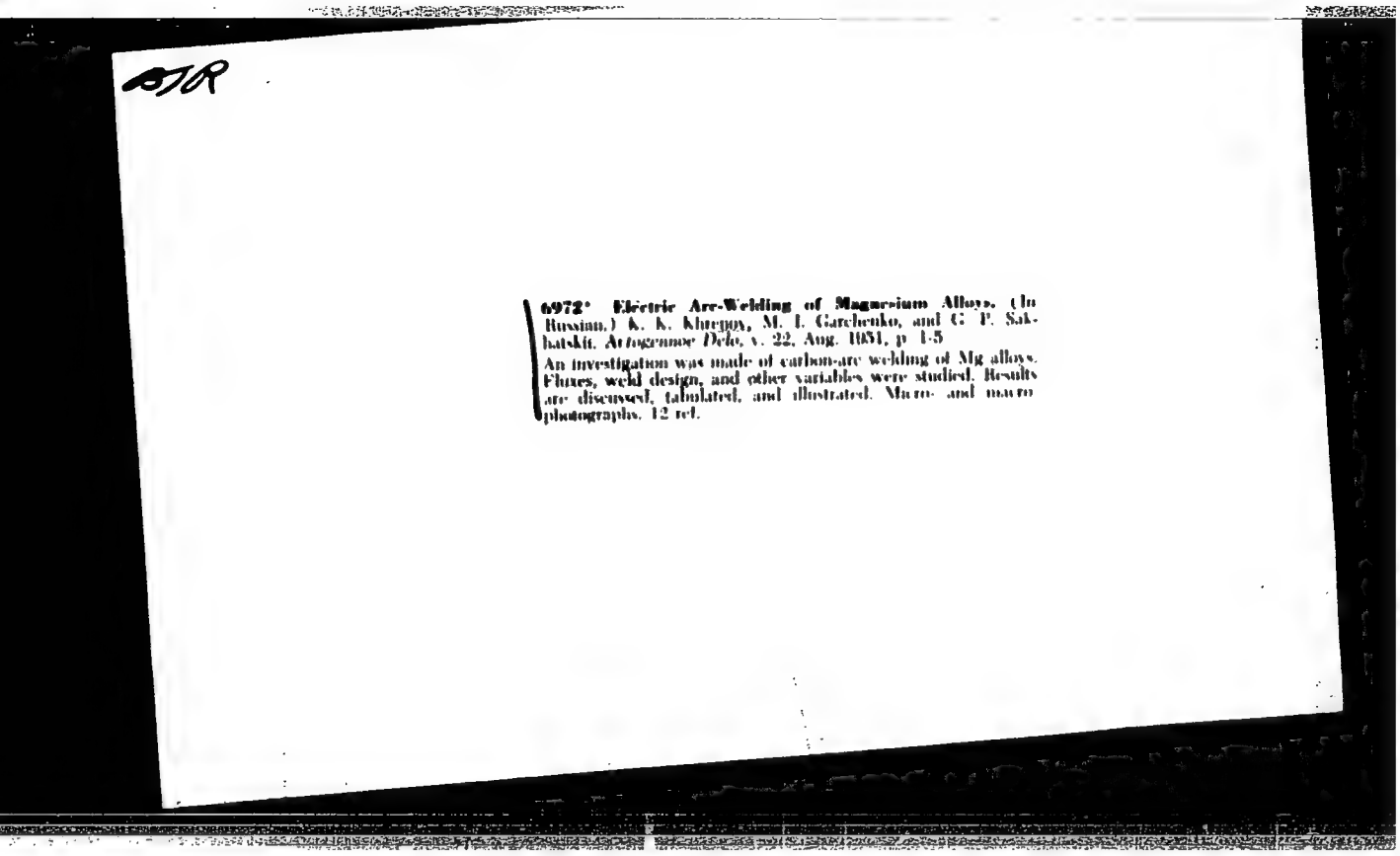
200T47

USSR/Engineering - Welding, Magnesium (Contd) Aug 51

Homogenization of welded specimens failed to improve noticeably mech properties. Macro- and microstructure of welded joints showed satisfactory weldability of metal. Tabulates conditions of dc welding, using carbon electrode.

200T47

KHRENOV, K.K.



6972* **Electric Arc-Welding of Magnesium Alloys.** (In Russian.) A. A. Kharpov, M. I. Garchenko, and G. P. Sakhatskii. *Avtogennoe Delo*, v. 22, Aug. 1951, p 1-5

An investigation was made of carbon-arc welding of Mg alloys. Fluxes, weld design, and other variables were studied. Results are discussed, tabulated, and illustrated. Macro- and macrophotographs. 12 ref.

B.J.R

Metals - Welding or Joining

3210* **Solid Ceramic Fluxes For Automatic Welding.** (In Russian.) K. K. Khrenov and D. M. Kushnerev. *Avtogennoe Delo*, v. 22, June 1951, p. 1-4.

A series of fluxes are described which are particularly useful for welding corroded surfaces and for welding or building up low-alloy steels.

KHRENOV, K. K.

Technology

Welding, cutting and soldering of metals, Kiev, Mashgiz, 1952

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

KHRENOV , K. K.

USSR/Engineering - Welding, Methods Jan 52

"New Method for Arc Welding of Cast Iron," K.K. Khrenov, Act Mem Acad Sci Ukrainian SSR, P.S. Vol'fovskaya, Engr

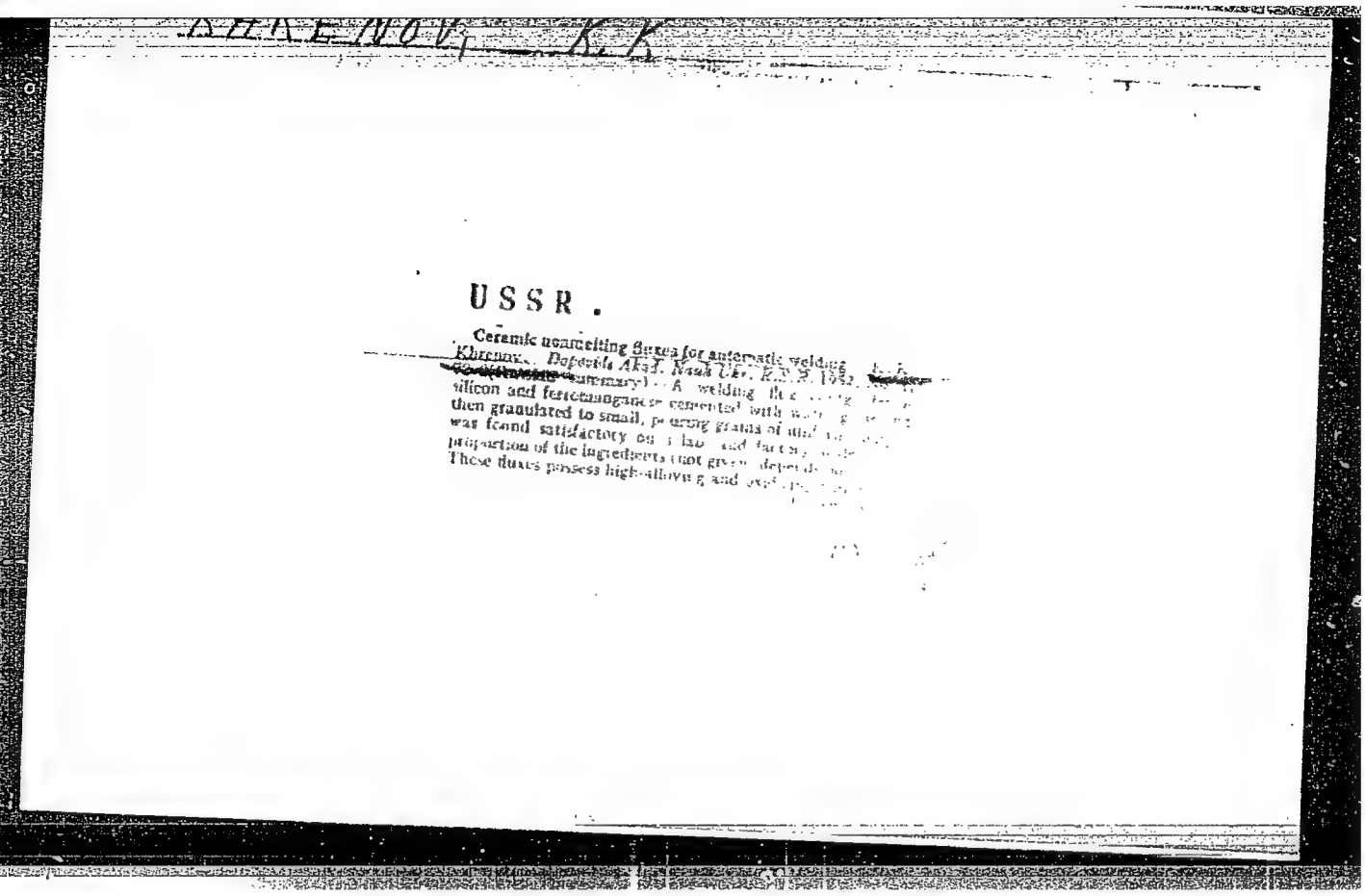
"Avtogen Delo" No 1, pp 3-6

Describes method of carbon arc welding without direct action of arc on base metal. Discusses expts for using various welding rods, including copper, bronzes and Ni-Cu alloy, 2-layer welding with formation of steel working surface, methods for testing welded joints, etc. Advantages of

212T11

method: complete elimination of chilling effect in welded zone of cast iron, absence of hard inclusions in weld and high strength of joint.

212T11



BELYAKOV, K.K.

USSR.

Ceramic noncrucible fluxes for automatic welding
Khrenov, ... Doklady Akad. Nauk Ukr. S.S.R. 1952
(abstract summary) A welding flux ... silicon and ferromanganese cemented with ... then granulated to small, porous grains of ... was found satisfactory on ... preparation of the ingredients (not given) ... These fluxes possess high-alloying and ...

KHRENOV, K. K.

USSR/Metallurgy - Welding, Methods Aug 52

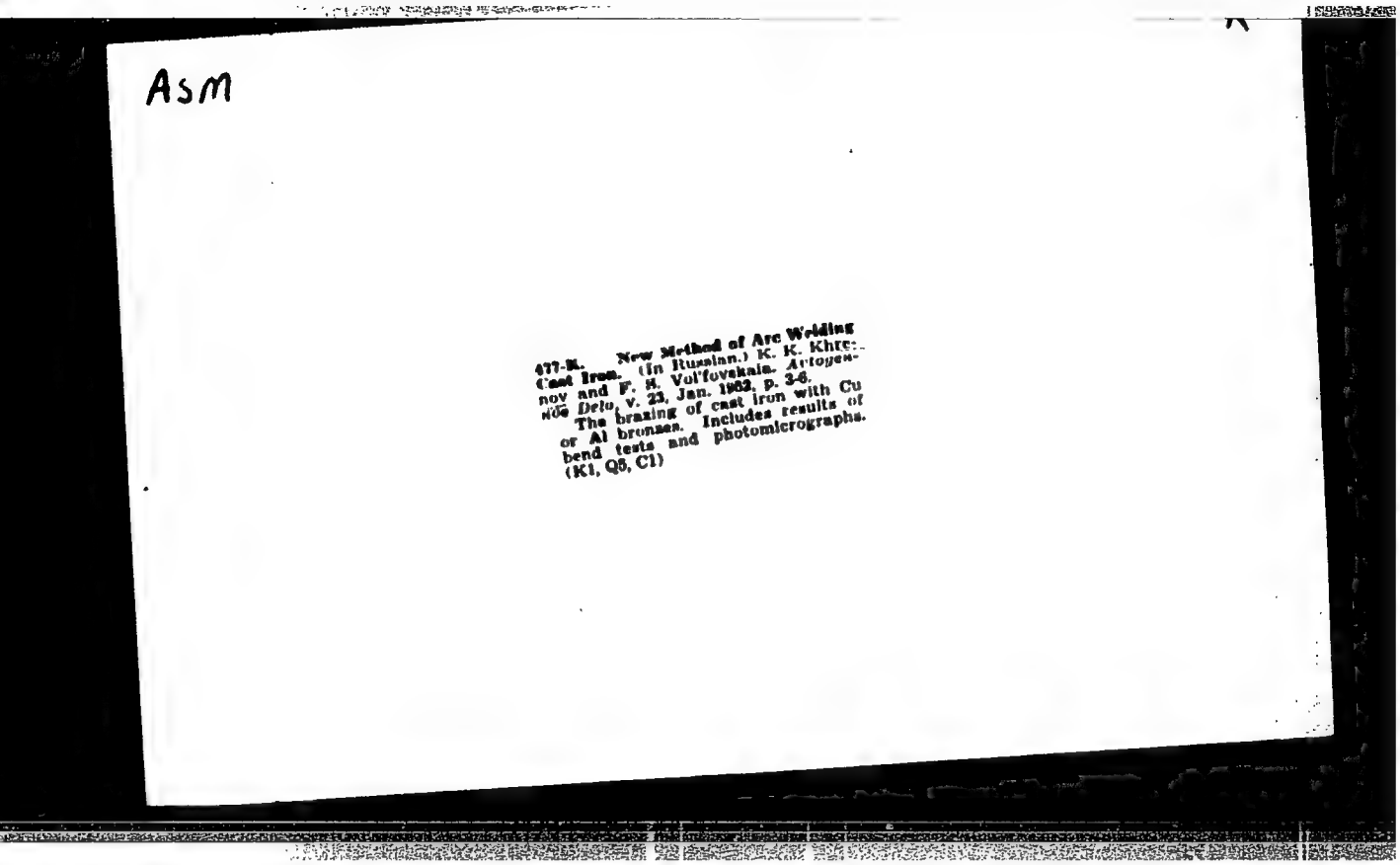
PA 233T46

"Condenser Welding of the Parts of Electric Measuring Instruments," K.K. Khrenov, Act Mem, Acad Sci Ukrainian SSR, V.E. Moravskiy, Engr, Kiev Polytech Inst

"Avtogen Delo" No 8, pp 4-7

Investigates resistance welding of small parts of instruments, feeding discharge of condenser battery into welding transformer. Special copper electrodes with wolfram inserts were experimentally developed. Gives elec diagram of installation and describes mechanism for maintaining constance of forces applied to electrodes. Investigates also process of condenser welding with the aid of electromagnetic oscillograph. Method is economical and productive, and may successfully substitute for tin soldering now in use.

233T46



KHRENOV, K. K., MORAVSKIY, V. YE.

Measuring Instruments

Condenser welding of parts for electrical measuring instruments. Avtog. delo 23, no. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November, 1952 1953, Uncl.

KHRENOV, K.K., redaktor; CHUMACHENKO, T., redaktor; GOLOVCHENKO, G., tekhnicheskiy redaktor.

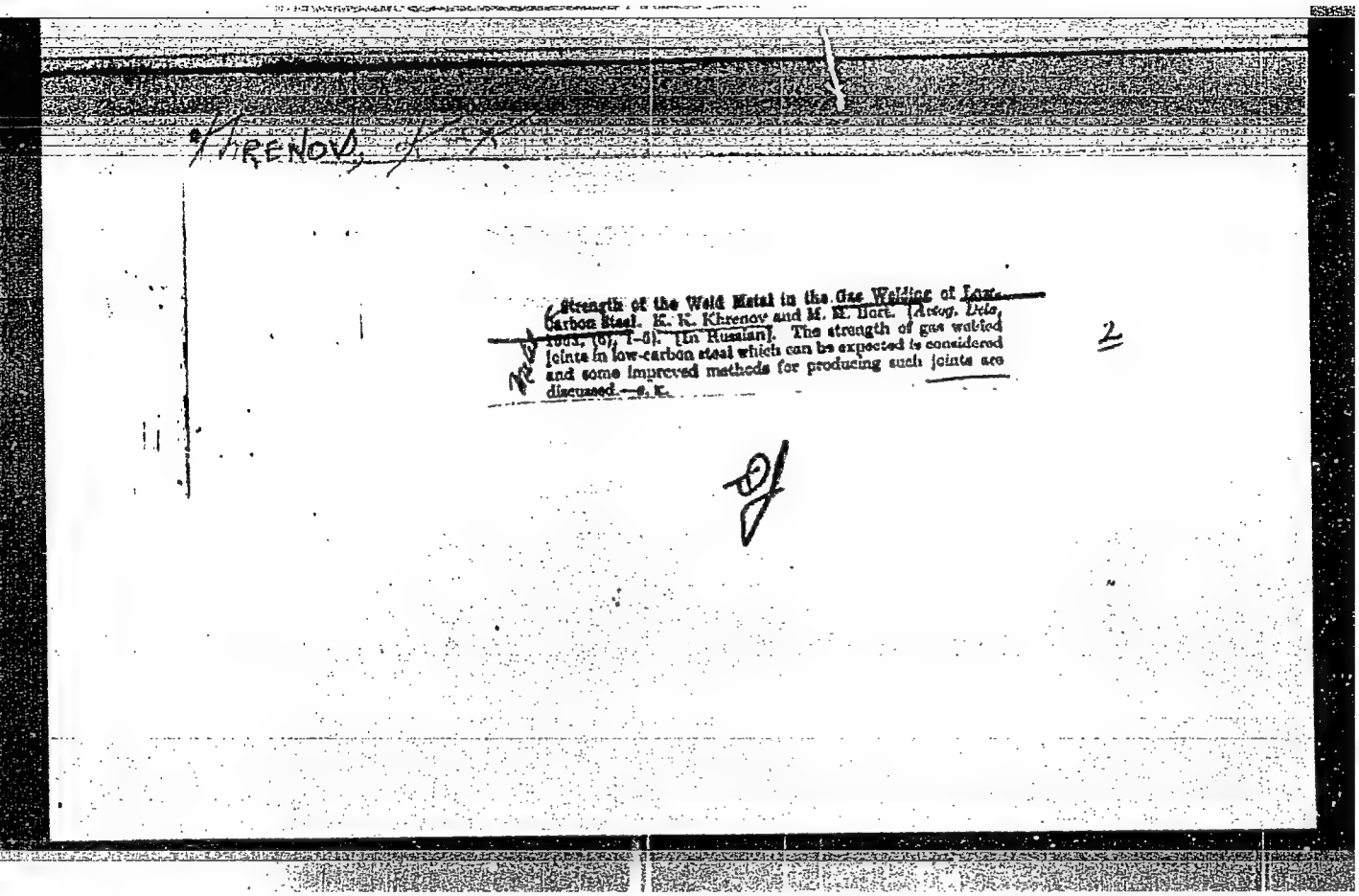
[New methods of welding and cutting metals] Novye sposoby svarki i reski metallov. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1953. 246 p.

1. Deystvitel'nyy chlen AN Ukrainskoy SSR.
(Welding) (Metal cutting)

KHRENOV, K.; VOL'FOVSKAVIA, F.

"New Method for Arc Welding of Steel", Tr. from the Russian, P. 33, (RATSIONALIZATSIIA, Vol. 3, No. 10/11, Oct./Nov. 1953, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.



KHRENOV, K. K.

Strength of the Weld Metal in the Gas Welding of Low-Carbon Steel. K. K. Khrenov and M. M. Ilare. [Avtog. Delo, 1953, (6), 7-8]. [In Russian]. The strength of gas welded joints in low-carbon steel which can be expected is considered and some improved methods for producing such joints are discussed.—S. K.

KHRENOV, K.K., deystvytel'nyy chlen; BORT, M.M., kandidat tekhnicheskikh nauk.

Strength of metal welds in gas welding of low carbon steel. Avtog. delo 24 no.6:1-5 Je '53. (MLRA 6:5)

1. Akademiya Nauk USSR (for Khrenov). 2. Kiyevskiy politekhnicheskiy institut. (Oxyacetylene welding and cutting) (Strength of materials)

KHRENOV, K.K.

SLAVYANOV, Nikolay Gavrilovich; KHRENOV, K.K., akademik; NAZAROV, S.T., kandidat tekhnicheskikh nauk; MODEL', B.I., tekhnicheskiy redaktor

[Electric metal casting] Elektricheskaya otlivka metallov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 92 p. (MLRA 8:3)
(Founding) (Electrometallurgy)

KHRENOV, K.K.; KUSHNEREV, D.M.; AFONINA, G., redaktor; VUYEK, M., tekhredaktor.

[Ceramic fluxes for automatic arc welding] Keramicheskie fliusy dlia avtomaticheskoi dugovoi svarki. Kiev, Gos.izd-vo tekhn. lit-ry, USSR, 1954. 106 p. (MLRA 8:9)
(Electric welding)

KHRENOV, K. K.

USSR/Scientific Organization FD 263

Card 1/1

Author : Khrenov, K. K., Corresponding Member (1), Member (2)

Title : Contribution of Ukrainian scientists in the development of Soviet science and engineering

Periodical : Iz. Ak Nauk SSSR, OTN, 1, 3-13, Jan 1954

Abstract : Gives type of research engaged in and a brief history of the eleven independent scientific establishments that are in the Division of Technical Sciences of the Academy of Sciences of the Ukrainian SSR. Gives names of about 100 affiliated scientist-engineers and their fields of work.

Institution: (1) Academy of Sciences of the U.S.S.R., (2) Academy of Sciences of the Ukrainian SSR

KHRENOV, Konstantin Konstantinovich; GRIBEL'NIK, P.G., kand.tekhn.nauk, retsenzent; FURER, P.Ya., red.; RUDENSKIY, Ya.V., tekhn.red.

[Welding, cutting, and soldering of metals] Svarka, reska i paika metallov. Izd.2., perer. i dop. Kiev, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1955. 411 p. (MIRA 12:8)
(Welding) (Metal cutting)

KHRENOV, K. K.

USSR.

10989* Cold Welding of Aluminum and Copper Conductors. Kholodnaia svarka alliuminievykh i mednykh provodov. (Russian.) K. K. Khrenov and G. P. Sakhatskii. *Svarochnoe Proizvodstvo*, 1955, no. 4, Apr., p. 1-4.

Cold welding instruments and techniques; strength properties of cold welds. Photographs, diagrams, table.

M BI

Khrenov, K. K.

USSR.

13510* Ceramic Fluxes for Automatic Arc Welding. Keramicheskie flusy dlia avtomaticheskoi dugovoi svarki. (Russian.) K. K. Khrenov and D. M. Kushnerev. Svarochnoe Proizvodstvo, 1955, no. 7, July, p. 13-16.

Effect of fluxes on strength, hardness, and micro-structure, of base metal and surface. Micrographs, photographs, tables. 7 ref.

KHRENOV, K.K.; BAKULIN, D.I.

Journal "Automatic welding." Visnyk AN URSR 26 no.1:79-80 Ja '55.
(Welding--Periodicals)

KHRENOV, K.K.

Outstanding metallurgist; on the 70th birthday of M.V.Luhovtsov, active member of the Academy of Sciences of the Ukrainian S.S.R. Visnyk AN URSR 26 no.5:43-45 My '55. (MLRA 8:8)
(Luhovtsov, Maksym Vlasovych, 1885-)

KHRENOV, Konstantin Konstantinovich; KOCHERGA, M., veduchiy redaktor; [illegible], P., tekhnichniy redaktor

[Electric welding in Czechoslovakia] Elektrozvariuvannia v Chekhoslovats'kii Respublitsi. Kyiv, Derzh. vyd-vo tekhn. lit-ry URSR, 1956. 43 p. (MLRA 10:4)

(Czechoslovakia--Electric welding)

AID P - 4870

Subject : USSR/Engineering

Card 1/1 Pub. 107-a - 4/14

Authors : Khrenov, K. K. and G. P. Sakhatskiy

Title : Shape of punch affecting the strength of the spot-joint in the cold welding of aluminum.

Periodical : Svar. proizv., 4, 12-14, Ap 1956

Abstract : The authors present data of their research carried out at the Academy of Sciences of the Urainian SSR and the Kiev Polytechnic Institute. They describe various punches for rectangular, round, profile and other configurations of the non-ferrous metal spots to be welded, and the results obtained. Three tables, 5 drawings, 2 photos. 2 Russian references (1949-53).

Institutions: Academy of Sciences of the Urainian SSR and the Kiev Polytechnic Institute.

Submitted : No date

KREMKOV, K.

Cold-welding of metals. p. 19.

Vol. 5, no. 1, 1956
ZVARACSKY SBORNIK
Bratislava, Czechoslovakia

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

KHRYENOV, K.K.

Technical institutes of the Ukrainian Academy of Sciences before the 20th Congress of the Communist Party. Visnyk AN URSR 27 no.2: 19-26 F '56. (MLRA 9:6)
(Engineering--Study and teaching)

AHRENOVA

PALLADIN, O.V., red.; SEMENENKO, M.P., akademik, red.; SHCHERBAN', O.N., akademik, red.; GNEDENKO, B.V. [Hnedenko, B.V.], akademik, red.; DELIMARSKIY, Yu.K. [Delimars'kyi, IU.K.], akademik, red.; KAVETSKIY, R.Ye. [Kavets'kyi, R.IE.], akademik, red.; KHRENOV, K.K. [Khrienov, K.K.], akademik, red.; KOROID, O.S., kand.ekon.nauk, red.; GUDZENKO, P.P. [Hudzenko, P.P.], kand.ist.nauk, red.; SHIKAN, V.L., red. izd-va; RAKHLINA, N.P., tekhn.red.

[Development of science in the Ukraine during the past 40 years] Rozvytok nauky v Ukraïns'kiĭ RSR za 40 rokiv. Kyiv, 1957. 529 p. (MIRA 11:3)

1. Akademiya nauk URSR, Kiyev. (for Semenenko, Shcherban', Gnedenko, Delimarskiy, Kavetskiy, Khrenov)
(Ukraine--Science)

KHRENOV, K.K

SUBJECT: USSR/Welding 135-3-17/17

AUTHORS: Khrenov, K.K., Academician, Bort, M.M., Candidate of Technical Sciences, and Kotvitskiy, A.D., Candidate of Technical Sciences.

TITLE: On the Problem of Cutting Thick Sections by Low-Pressure Oxygen. (K voprosu o reske bol'shikh tolshchin kislorodom nizkogo davleniya).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, #3, pp 30-31 (USSR)

ABSTRACT: Critical review of the article "Investigation of Cutting thick steel sections by low-pressure oxygen" ("Issledovaniye razdelitel' noy reski stali bol'shikh tolshchin kislorodom nizkogo davleniya" by S.C. Guzov, and O.Sh. Spektor (1).- "Trudy VNIIAvtogen, ed. III, Goskhimizdat, 1955.

The authors consider erroneous and contradictory the evaluation results given in the criticized work concerning the effect of oxygen pressure, the losses of oxygen depending on the various shapes of nozzle, the pressure existing inside the nozzle, and the way the nozzle shape affects the oxygen stream. ....." It is regretable that the authors made a considerable effort to study the staged cylindrical nozzles which are known to be of the

Card 1/2

135-3-17/17

TITLE: On the Problem of Cutting Thick Sections by Low-Pressure Oxygen. (K voprosu o rezke bol'shikh tolshchin kislorodom nizkogo davleniya).

least satisfactory nozzle design, but made no use of the correct calculation and production method of smooth nozzles with continuous expansion of bore and impactless stream of gas, and completely ignored the smoothly-narrowing nozzles which have considerably better gas-dynamic flow properties as compared to the simple cylindrical nozzles chosen by the authors as the best".

The article contains 3 references (two of them by the criticized authors, all Russian).

ASSOCIATION: Kiyev Polytechnical Institute (Kiyevskiy politekhnicheskiy institut)

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

KHRENOV, K.K.

21-5-18/26

AUTHORS: Khrenov, K.K., Member of the AN Ukrainian SSR, and Kushnerev (Kushner'ov), D.M.

TITLE: A Machine for Granulating Ceramic Flux (Mashina dlya granulirovaniya keramicheskogo flyusa)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, Nr 5, pp. 499-501 (USSR)

ABSTRACT: The authors describe a new machine, "МГКФ -4," designed by them for granulating ceramic fluxes for automatic arc welding. The capacity of this machine is about 200 kg of fluxes per hour. Its dimensions are: height - 1,300 mm; width - 570 mm; length - 1,420 mm. Its weight is 150 kg. It is driven by a 0.5-kW electric motor. The machine is reliable and simple to operate.
The article contains 1 figure, 2 photos and 2 Slavic references.

ASSOCIATION: Institute of Electrical Engineering of the AN Ukrainian SSR (Instytut elektrotekhniky AN URSR)

SUBMITTED: 12 February 1957

AVAILABLE: Library of Congress

Card 1/1

KHRENOV, K.K.

135-8-12/19

SUBJECT: USSR/Welding

AUTHORS: Mazel', A.G., Candidate of Technical Sciences, and Khrenov K.K., Junior Scientific Co-Worker.

TITLE: Electrical Generator Characteristics for Welding in Carbon Dioxide. (Elektricheskiye kharakteristiki istochnika toka pri svarke v uglekislom gaze).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, #8, pp 31-34 (USSR)

ABSTRACT: The article presents the results of experimental studies of a process which has the advantage of low cost and high productivity, but which is accompanied with splatter and porosity of weld metal. These drawbacks may be reduced considerably by using very short arcs. No common generator gives a stable short arc, and short circuits occur constantly when short arcs are obtained.

It was stated that the process is more stable with inverse polarity than with direct polarity. Welding with direct polarity and a falling outer generator characteristic was only possible with a long arc. The rigid outer characteristics nearly completely eliminated short circuits.

Card 1/2

135-8-12/19

TITLE: Electrical Generator Characteristics for Welding in Carbon Dioxide. (Elektricheskiye kharakteristiki istochnika toka pri svarke v uglekislom gaze)

The connection between porosity and the transfer of metal in the arc was studied. Increasing the length of the arc was accompanied with carbonization, burning-out of silicon and increased nitrogen and oxygen content in the weld metal (4). A rigid outer characteristic, under equal conditions resulted in lesser porosity than a falling characteristic, which is apparently due to more intense transfer of metal across the gap and to a more stable burning of the arc.

Welding machines "ПСМ-1000", or "ПС-500" and others, can be adapted for rigid characteristics (the necessary changes are described).
The article contains 7 diagrams, 1 table, and 5 bibliographic references, 3 of which are Russian.

ASSOCIATION: "VNIIStroyneft"
PRESENTED BY:
SUBMITTED:
AVAILABLE: At the Library of Congress.

Card 2/2

KHRENOV, K. K.

135-9-12/24

AUTHORS: Khrenov, K.K., Member of the Academy of Sciences, Ukrainian SSR, and Kushnerev, D.M., Candidate of Technical Sciences

TITLE: A Mechanical Method of Granulating Ceramic Fluxes (Mekhanizirovannyy sposob granulirovaniya keramicheskikh flyusov)

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 9, p 29-30 (USSR)

ABSTRACT: The article illustrates and gives operating information on machine "МГКФ -4" for granulating undried ceramic flux mass. This machine has a capacity of 200 kg/hr and consists basically of a rotating horizontal steel disk with tapered apertures, and resilient steel blades which are intermittently pressed down to the rotating disk. The soft flux mass which is fed unto the disk is, in this way, periodically pressed through the apertures in the disk, and the sharp upper edges of apertures cut off uniform pieces. The mass does neither liquify - as it did in other experimental methods of granulating - nor get unduly dense or warm, for the pressure is applied for only a short time and raised again to press the next lot. The cutting edges of apertures are being continually sharpened with the progressing wear of the disk. It is stated that

Card 1/2

A Mechanical Method of Granulating Ceramic Fluxes 135-9-12/24

up to now granulating of ceramic fluxes used for arc welding of special alloy steel constituted a bottleneck in the production of such fluxes. The described machine has already been tested. Additional information on it may be obtained at the Academy of Sciences, Ukrainian SSR, Kiyev. Engineer L.S.Zver'kov is mentioned in connection with design work on the machine. The article contains 1 sketch and 2 photographs.

AVAILABLE: Library of Congress

Card 2/2

KHRENOV, K.K.

KHRENOV, K.K., akademik; GURSKIY, P.I., inzh.

Cold welding of wires. Elek.sta. 28 no.10:68-72 '57. (MIRA 10:11)
(Electric wire--Welding)

SOV-135-58-2-14/18

AUTHOR: Khrenov, K. K., [illegible] Member of the AS UkrSSR

TITLE: Letter to the Editor (Pis'mo v redaktsiyu)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 2, p 46 (USSR)

ABSTRACT: With reference to a previous article by Ye. V. Sokolov, published in Nr 11, 1957, of this periodical, entitled "Electrodes For Arc Welding and [illegible]", the author presents general information on the production of electrodes in the USSR.

Card 1/1 1. Arc welding--Electrodes 2. Electrodes--Production

SOV-135-58-9-18/20

AUTHOR: Khrenov, K.K., Academician, AS UkrSSR

TITLE: An Interesting Book (Interesnaya kniga)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 9, pp 44-45 (USSR)

ABSTRACT: This is the critical review of a book by S.B. Aynbinder, entitled"Cold Welding of Metals", published in 1957 by the Latvian Academy of Sciences.

1. Welding--USSR

Card 1/1

SOV/125-58-12-6/13

AUTHORS: Khrenov, K.K., Gapchenko, M.N. and Kushnerev, D.M.

TITLE: The Automatic Welding of Cold-Resistant Steel Under a Ceramic Flux (Avtomaticheskaya svarka khladostoykoy stali pod keramicheskim flyusom)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 12, pp 50-56 (USSR)

ABSTRACT: Information is given on the results of experiments carried out to determine the composition of a ceramic flux, the welding technology and the heat treatment ensuring satisfactory tightness and cold resistance of weld joints in "12N3" grade steel. It was stated that a satisfactory toughness of welds in a temperature of -160°C was obtained with the use of a "Sv-08A" electrode (0.00% C, 0.36% Mn, 0.02% Si, 0.029% S, 0.015% P). A series of fluxes were tested, and the best results were obtained with the use of "KS-12N3" flux of the following composition: 52.9% marble, 20% fluorite, 15.0% titanium dioxide, 6.0% ferrotitanium, 0.8 ferromanganese, 1.2% ferrosilicon, 4.0% metallic nickel, 17 - 20% sodium silicate solution of 1.3 - 22% density. The required cold resistance of weld joints was ensured by a special heat treatment (hardening or normalization with subsequent tempering).

Card 1/2

SOV/125-58-12-6/13

The Automatic Welding of Cold-Resistant Steel Under a Ceramic Flux

Normalization by local heating is recommended for industrial use.
There are 4 sets of microphotos, 1 graph, 2 tables and 9 Soviet references.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

SUBMITTED: July 12, 1958

Card 2/2

KHRENOV, K.K. [Khrienov, K.K.], akademik

G.I. Sukhomel, member of the Academy of Sciences of the Ukrainian S.S.R. Visnyk.URSR 29 no.10:54-57 O '58. (MIRA 11:11)

1. AN USSR.

(Sukhomel, Georgii Iosifovich, 1888-)

KOCHO, Valentin Stepanovich; KHAN, Boris Khononovich; KHRENOV, K.K., akademik, otv.red.; REMENNIK, T.K., red.izd-va; MAZURIK, T.Ya., tekhn.red.

Nikolai Nikolaevich Dobrokhotov. Kiev, Izd-vo Akad.nauk USSR, 1959. 29 p. (MIRA 13:2)

1. AN USSR (for Khrenov).
(Dobrokhotov, Nikolai Nikolaevich, 1889-)

KHRENOV, KONSTANTIN K.

RADUNSKIY, Lev Davydovich; KHRENOV, Konstantin Konstantinovich, akademik; retsenzent; OL'SHANSKIY, Nikolay Aleksandrovich, red.; LARIONOV, G.Ye., tekhn.red.

[Technical development of electric arc welding of metals in Russia] Razvitie tekhniki elektricheskoi dugovoi svarki metallov v Rossii. Moskva, Gos.energ.izd-vo, 1959. 167 p. (MIRA 12:4)

1. AN USSR; chlen korrespondent AN SSSR (for Khrenov).
(Electric welding)

25(1) PHASE I BOOK EXPLOITATION SOV/3077

Khrenov, Konstantin Konstantinovich

Svarka, rezka i payka metallov (Welding, Cutting, Soldering, and Brazing of Metals) 2nd ed., rev. and enl. Kiyev, Mashgiz, 1959. 411 p. 17,000 copies printed.

Reviewer: P.G. Grebel'nik, Candidate of Technical Sciences; Ed.: P. Ya. Furer; Tech. Ed.: Ya.V. Rudenskiy; Chief Ed. (Southern Division, Mashgiz): V.K. Serdyuk, Engineer.

PURPOSE: This book is intended for technical personnel and skilled workers. It may also be used by students in schools of higher technical education.

COVERAGE: The fundamentals of contemporary welding, soldering, brazing, and flame-cutting processes are presented. A description is given of the more important electric and gas methods, including the machinery and equipment used. There is a brief review of less frequently used welding methods and welding processes for special steels, cast iron, nonferrous metals, and titanium and similar alloys.

Card 1/9

Welding, Cutting, Soldering, (Cont.) SOV/3077

Questions of quality control in welding are treated. Hard facing, brazing, and soldering of nonferrous metals, and problems of underwater metal cutting are also discussed. No personalities are mentioned. There are 32 references, all Soviet.

TABLE OF CONTENTS:

2/9

KULEBAKIN, V.S., akademik, otv.red.; BODNER, V.A., doktor tekhn.nauk, red.; IVAKHNENKO, A.G., doktor tekhn.nauk, red.; ISHLINSKIY, A.Yu., akademik, red.; KACHANOVA, N.A., kand.tekhn.nauk, red.; KUZNETSOV, P.I., doktor fiz.-matem.nauk, red.; KUKHTENKO, A.I., doktor tekhn.nauk, red.; PETROV, B.N., red.; POPOV, Ye.P., doktor tekhn.nauk, red.; ULANOV, G.M., doktor tekhn.nauk, red.; KHRENOV, K.K., akademik, red.; CHIMAYEV, P.I., kand.tekhn.nauk, red.; CHUMAKOV, N.M., kand.tekhn.nauk, red.; KHUGLOV, G.V., tekhn.red.

[Invariancy theory and its application to automatic devices] Teoriia invariantnosti i ee primenenie v avtomaticheskikh ustroistvakh; trudy soveshchaniia. Moskva, Akad.nauk USSR, Otd-nie tekhn.nauk, 1959. 381 p. (MIRA 13:7)

1. Soveshchaniye po teorii invariantnosti i eye primeneniyu v avtomaticheskikh ustroystvakh, Kiyev, 1958. 2. AN USSR (for Ishlinskiy, Khrenov). 3. Chlen-korresp.AN SSSR (for Petrov). (Automatic control)

PATON, Yevgeniy Oskarovich [deceased]; SAVIN, G.N., akademik, otv.red.; DOBROKHOTOV, N.N., akademik, red.; KHRENOV, K.K., akademik, red.; BELYANKIN, F.P., akademik, red.; PATON, B.Ye., akademik, red.; KAZANTSEV, B.A., red.izd-va; REMENNIK, T.K., red.izd-va; KADASHEVICH, O.A., tekhn.red.

[Selected works in three volumes] Izbrannye trudy v trekh tomakh. Kiev, Izd-vo Akad.nauk USSR. Vol.1. [Study of the performance of bridge span structures] Issledovaniia raboty proletnykh stroenii mostov. 1959. 578 p. (MIRA 12:10)

1. AN USSR (for Savin, Dobrokhotov, Khrenov, Belyankin, B.Ye.Paton). (Bridges, Iron and steel)

25(1)

SOV/135-59-3-9/24

AUTHORS: Khrenov, K.K., Academician, and Zhdanov, I.M., Engineer

TITLE: An Instrument for Measuring Temporary Welding Deformations (Pribor dlya izmereniya vremennykh svarochnykh deformatsiy)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 16-18 (USSR)

ABSTRACT: This deformation-meter "DRV-2" is designed for the experimental determination of the deformations taking place during the welding process, and the subsequent cooling of metal frame structures. The instrument is of indicator type design and measures the crosswise deformations of a joint. It can also measure the lengthwise deformations in slightly heated areas in a welded joint. Detailed design information is given and the computations to be made are illustrated by examples. The measurement errors caused by the design features do not exceed 0.06 % and can be increased up to 0.25 % by an inaccurate setting.

Card 1/2

Kiev Polytech Inst.

18(5),28(1)

SOV/135-59-6-2/20

AUTHOR: Khrenov, K. K., Member, Academy of Sciences (Ukraine), Poznyak, L. A., Candidate of Technical Sciences, Yuzvenko, Yu. A., Candidate of Technical Sciences, Samotryasov, M. S., Candidate of Technical Sciences

TITLE: Features of Modification of Seam Welds by Titanium in the Automatic Welding of Medium Steel

PERIODICAL: Svarochnoye Proizvodstvo, 1959, Nr 6, pp 6-8 (USSR)

ABSTRACT: In welding high carbon-content steels, hot cracks and tempering structures are formed around the welding zone. The difficulties are increased if metal is heated before welding. It is shown in [Ref 1 and 2] that in metal containing more than 0.16-0.20% C-hydrate heat-fissures are formed. [Ref 4 and 5] represent the experiment of introducing fluxes of titanium and aluminum into the welding tub by electrode-wires. In [Ref 5] there is shown the experiment of removing the heat-fissures in cast steel with a high percentage of C-hydrate (0.50-2.0%) by introducing titanium by powdery-electrodes. The experiment was successful.

Card 1/3

Features of Modification of Seam Welds by Titanium in the Automatic Welding of Medium Steel

However, the result was no modification, but an alloy. The author discusses the influence of titanium into the welding tub by electrode-wires and ceramic fluxes. Two series of investigations have been accomplished: 1) The introduction of various quantities of titanium by Sv-0.8 electrodes in welding with AN-348A and AN-20 fluxes; 2) Introduction of titanium by Sv-0.8 electrodes according to GOST 2246-54 of 5 mm diameter, into welding tub with KS-1 ceramic fluxes [Ref 6]. Table 1 and 2 show the chemical structure of seam metal and the presence of fissures. In Photograph 1 the initial structure of the seams is shown. In Photograph 2 the structure of the seams under influence of ceramic fluxes is shown. Table 3 and 4 represent the results of toughness investigations. According to these, modification may be applied: 1) If the melted metal contains small hard parts which can form the center of crystallization after cooling; 2) If a small quantity of admixture which concentrates at the surface when crystallizing and hinders growing,

Features of Modification of Seam Welds by Titanium in the Automatic Welding of Medium Steel

is introduced into the casting. V. I. Danilov [Ref 10] has discussed the admixture for heating metals. V. M. Maltsev [Ref 13] has been experimenting with the same problem. The author suggests the application of ceramic fluxes containing a modifier for seam-welding with 0.008-0.018% titanium. About 0.5% titanium should be introduced into the weld by electrode-wires. There are 2 photographs, 4 tables, 1 graph and 13 references, 11 of which are Soviet, 1 Japanese and 1 American.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

18(5,7) SOV/135-59-8-5/24

AUTHORS: Mazel', A.G., Candidate of Technical Sciences, Burlakova, R.P., Engineer, and Khrenov, K.K., Engineer

TITLE: Research of Carbon - Dioxide Shielded Welding of Low-Carbon Steel With Sintering Powder

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 8, pp 15-17 (USSR)

ABSTRACT: It is known that in welding with carbon-dioxide shield and with an electrode of 2mm and more a lot of metal is spilled. The spatters may close the jet of the burner, which makes it necessary to interrupt the welding frequently in order to clean the burner. The use of special nozzles and feeders with stiff constructions may solve the problem only partially. A complete removal of the spatters is possible by using carbon-dioxide shielded welding with thin electrode-wires of a thickness of 0.8-1 mm, a small precisely regulated electrode arm, and an arc voltage of at the most 17-20 V, which assures that the arc is very frequently short-circuited by the drops of metal. The welding in this case must be carried out by the feeder with a

Card 1/5

stiff characteristic and high dynamical qualities. If the electrode arm is thin, the welding can be carried out only with weak currents. Therefore, a wire of this sort is recommended for welding of thin metal parts. If the parts are thicker than 3-4 mm, thin wires are not very effective. The study which was done at the VNIIST shows, that the introduction of compounds which form slags into the welding zone is an effective way to remove the spatters in CO_2-shielded welding of large spots. The slag-shield must also add to clean the welding of non-metallic inclusions and to a better removal of the dissolved gases, which improves the plastic qualities in the molten metal. An important advantage of using slag-forming compounds is the fact that this makes it superfluous to use special welding wires. Quite reliable results are obtained with using unkilled steel. Welding with such wires and correspondingly composed slag-forming compounds assures solid seams. The introduction of

slag-forming compounds is possible by several methods. The authors used the method of welding with sintering powder. The difference lies in the fact, that welding with sintering powder is not done in the air, but under a shield of CO_2. A special apparatus was added to the welding transformer TS-17M (Figure 1) which is used for a simultaneous feeding of the gas and the powder. The powder, which contains iron powder, is magnetized and attracted by the wire as soon as it leaves the tank 1 and comes into the magnetic field caused by the welding current. The special sleeve 2 assures a definite thickness of the layer of flux on the wire. The permanent magnet 3 of the alloys "al'nisi" or "magniko" creates a magnetic field around the wire in case the welding is interrupted and thus prevents a spilling of the flux. The CO_2 enters the angular chamber 4 and the nozzle 5 through the gas pipe. The burner is cooled with water which flows through pipe 6. The welding was carried out with the wire of type

Research of Carbon-Dioxide Shielded Welding of Low-Carbon Steel With Sintering Powder

Sv-08A which was 2 mm strong; the electrode had a positive pole with a current of 300-400 A, and the welding speed was 30 m/h. The CO_2 consumption was 1000 l/h. Source of current was the welder PS-500. In determining the composition of the sintering powder it had to be taken into consideration that it is supposed to alloy and modify the seam without forming a gas shield. The powder was produced in the same way as the material for the coats of the electrodes. Table 1 gives the compositions of the fluxes and their technological characteristics. Fluxes with differing proportions of FeTi, Fe, CaF_2, and manganese ore were also produced. The compositions of the fluxes, their technological characteristics, and results of mechanical tests of the molten metal are given in table 2. The authors hope, that the development of a special apparatus for CO_2-shielded welding with an injector for the sintering powder will make it possible in the near future to introduce a new method of welding.

SOV/135-59-8-5/24

Research of Carbon-Dioxide Shielded Welding of Low-Carbon Steel With Sintering Powder

The authors come to the following conclusions: It is possible to reduce considerably the spattering of the metal if the combined welding method (sintering powder + CO_2) is used instead of welding only with CO_2. It is not necessary in this case to use special welding rods. The welding can be carried out with common low-carbon welding rods. The seams are not porous in this method. The plasticity and solidity of the joints is satisfactory. It is necessary to perfect the mechanism feeding the sintering powder, because the use of an anular permanent magnet does not allow a proportioning of the powder. There are 2 tables, 1 diagram, 6 graphs and 4 references, 2 of which are Soviet and 2 English.

ASSOCIATION: VNIIST

Card 5/5

KHRENOV, K.K. [Khrienov, K.K.], akademik

A congress in Vienna. Nauka i zhyttia 9 no.8:59-60
S '59. (MIRA 13:1)
(Welding--Congresses)
(Austria--Description and travel)

KHRENOV, K.K. [Khrienov, K.K.], akademik

An achievement of historical importance. Nauka i zhyttia 9 no.10:4 O '59. (MIRA 13:2)

1. AN USSR.

(Lunar probes)